SCIENCE
Third Grade

LIFE SCIENCE STANDARDS

1.0 Cell Structure and Function

The student will investigate the structure and function of plant and animal cells.

Key	Reporting Category		PLT ACTIVITY
M		Use magnifiers to study the smaller parts of plants and identify their functions.	65 Bursting Buds *(enrichment – use magnifiers to examine twigs & buds)* p. 277
A	**SF**	Identify the part that belongs to a specific plant or animal.	N/A
M		Use magnifiers to observe and describe what occurs when a plant loses a specific part (e.g., leaves, roots).	N/A
A	**SF**	Identify the part that is missing from a specific plant or animal.	63 Tree Factory, p. 269
D		Recognize that smaller parts of organisms are essential to their well being.	42 Sunlight and Shades…, p. 182 62 To Be a Tree, p. 265 63 Tree Factory, p. 269
A	**SF**	Identify the function of specific plant and animal parts.	42 Sunlight and Shades…, p. 182 62 To Be a Tree, p. 265 63 Tree Factory, p. 269

2.0 Interactions Between Living Things and Their Environment

The student will investigate how living things interact with one another and with nonliving elements of their environment.

D		Examine an object's characteristics to determine if the object is living or nonliving.	N/A
A	**E**	Distinguish between living and nonliving things in an illustration.	N/A
D		Explain how plants and animals depend upon each other and the nonliving elements of an environment to meet basic needs.	7 Habitat Pen Pals, p. 37 22 Trees as Habitats, p. 102 24 Nature's Recyclers, p. 108 27 Every Tree for Itself, p. 117 46 Schoolyard Safari, p. 197
A	**E**	Select the plants and animals found in a specific environment.	7 Habitat Pen Pals, p. 37 22 Trees as Habitats, p. 102
A	**E**	Identify the sense used to collect specific information.	36 Pollution Search, p. 153
D		Describe how environments are affected by various kinds of pollution.	36 Pollution Search, p. 153
A	**E**	Identify the environment that has been impacted by pollutants.	36 Pollution Search, p. 153

3.0 Food Production and Energy for Life

The student will study the basic parts of plants, investigate how plants produce food, and discover that plants and animals use food to sustain life.

D		Explain how animals depend on plants to meet their need for energy.	16 Pass the Plants, Please, p. 77 (Teacher: connect food to energy)
A	**SF**	Identify the basic needs of plants and animals.	63 Tree Factory, p. 269
A	**SF**	Recognize that animals obtain their food by eating plants or other animals.	22 Nature's Recyclers, p. 108
I		Examine the major parts of plants and determine their functions.	62 To Be a Tree, p. 265 63 Tree Factory, p. 269

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A	**SF**	Recognize that plants use sunlight, water, and air for photosynthesis.	28 Air Plants, p. 120 42 Sunlight and Shades of Green, p. 182

4.0 Heredity and Reproduction

The student will understand the basic principles of inheritance.

D		Recognize that organisms develop the ability to reproduce as they mature.	43 Have Seeds, Will Travel, p. 185 79 Tree Lifecycle, p. 341
D		Note similarities and differences between parents and offspring.	N/A
A	**LC**	Choose the diagram that depicts a parent with its offspring.	N/A
A	**LC**	Select the illustration that shows an adult organism.	N/A
D		Describe how an organism (e.g., frog, butterfly) changes as it matures.	79 Tree Lifecycle, p. 341 65 Bursting Buds, p. 277
A	**LC**	Select the illustration that shows how an organism changes as it matures.	79 Tree Lifecycle, p. 341

5.0 Diversity and Adaptation Among Living Things

The student will understand that living things have characteristics that enable them to survive in their environment.

D		Provide specific examples of differences among plants of the same kind.	64 Looking at Leaves, p. 273
A	**E**	Identify groups of similar organisms (i.e., plants and animals).	6 Picture This! p. 34 43 Have Seeds, Will Travel, p. 185 64 Looking at Leaves, p. 273
D		Specify the features that enable a plant or animal to survive in its environment.	7 Habitat Pen Pals p. 37 25 Birds and Worms, p. 111 43 Have Seeds, Will Travel, p. 185
A	**E**	Identify an organism that belongs in a specific environment.	7 Habitat Pen Pals, p. 37 21 Adopt a Tree (enrich #1), p. 97
A	**E**	Identify the characteristics that enable a specific plant and/or animal to survive in its environment.	7 Habitat Pen Pals, p. 37 25 Birds and Worms, p. 111

6.0 Biological Change

The student will understand that living things have changed over time.

A	**LC**	Identify an example, other than a dinosaur, of an extinct organism.	N/A
A	**LC**	Identify evidence used to determine that an organism previously existed.	N/A
A	**LC**	Match the organism to the evidence for its former existence.	N/A

EARTH SCIENCE STANDARDS

7.0 Earth and Its Place in the Universe

The student will investigate the structure of the universe.

A	**SC**	Choose the appropriate tool for observing a specific distant object.	N/A
D		Recognize that planets are major features of the universe.	N/A
A	**SC**	Identify the components of the solar system (e.g., planets, moon).	N/A
D		Explain how day and night result from the rotation of the Earth relative to the sun.	N/A
A	**SC**	Identify objects found in the day or nighttime sky.	N/A
A	**SC**	Identify the approximate time of day from a picture of the sun's position in the sky.	N/A
A	**SC**	Identify the four basic phases of the moon.	N/A

8.0 Atmospheric Cycles

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The student will investigate the relationships among atmospheric conditions, weather, and climate.

A	**SC**	Select appropriate clothing for a given weather condition.	N/A
A	**SC**	Match the cloud type to a specific kind of weather.	N/A
D		Explain how changes in temperature, precipitation, wind speed/direction result in different weather conditions.	N/A
A	**SC**	Identify the season when given a description of weather, plants, and animals.	78 Signs of Fall, p. 337
A	**SC**	Match temperature, precipitation, wind speed and direction, and cloud conditions with different weather conditions.	N/A
A	**SC**	Identify the appropriate tools to measure temperature and precipitation.	N/A
D		Use data to prepare an illustration of a specific day's weather.	N/A

9.0 Earth Features

The student will understand that the earth has many geological features that are constantly changing.

D		Compare and contrast a variety of different landforms and bodies of water.	N/A
A	**ER**	Identify the labeled part of a map or illustration as a continent, ocean, lake, river, mountain, or island.	N/A
A	**ER**	Select the illustration that identifies a specific geological feature.	N/A
A	**ER**	Identify a geological feature given specific information.	N/A

10.0 Earth Resources

The student will investigate the properties, uses, and conservation of earth's resources.

I		Explain the relationship between rocks and minerals.	N/A
D		Identify common types of rocks.	N/A
D		Identify materials and resources that can be reused.	13 We All Need Trees (part B), p. 65 15 A Few of My Favorite…, p. 75 51 Make Your Own Paper, p. 224
A	**ER**	Identify an object as natural or man-made.	N/A
A	**ER**	Recognize the properties used to identify specific earth materials.	N/A
A	**ER**	Identify methods for conserving natural resources.	13 We All Need Trees (part B), p. 65 15 A Few of My...(enrich.), p. 75 51 Make Your Own Paper, p. 224

PHYSICAL SCIENCE STANDARDS

11.0 Forces and Motion

The student will investigate the effects of force on the movement of objects.

I		Describe the relationship between the amount of force applied to an object and the distance the object moves.	N/A
A	**ME**	Identify that an unbalanced force is needed to change the direction of an object.	N/A
D		Recognize that objects move differently on different surfaces.	N/A
A	**ME**	Select how surface characteristics affect the movement of an object.	N/A
D		Recognize that magnets can move objects without touching them.	N/A
A	**ME**	Select an object that would be attracted by a magnet.	N/A
D		Describe how changing the position of an object affects a balanced system.	N/A
A	**ME**	Identify how weights affect a balanced scale.	N/A

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12.0 Structure and Properties of Matter

The student will investigate the characteristic properties of matter.

D		Classify materials according to their physical properties.	2 Get In Touch With Trees, p. 20
A	**M**	Select an object according to a particular property.	1 The Shape of Things, p. 17
A	**M**	Order objects according to a specific property (e.g., longest to shortest, heaviest to lightest).	N/A
A	**M**	Identify an object when given its properties.	68 Name That Tree, p. 288
D		Select and use appropriate tools to observe and measure the physical properties of materials.	N/A
A	**M**	Identify appropriate tools for determining the weight or length of materials.	N/A

13.0 Interactions of Matter

The student will investigate the interactions of matter.

D		Explain how materials change their form, color, or texture when they are mixed, separated, or heated.	N/A
A	**M**	Identify the effects of mixing two types of materials (e.g., salt and pepper).	N/A
A	**M**	Choose features associated with physical changes.	N/A
A	**M**	Identify methods for separating mixtures.	N/A

14.0 Energy

The student will investigate energy and its uses.

D		Analyze data to explain the heating and cooling of land, air, and water.	N/A
A	**ME**	Identify the source of the Earth's heat and light energy.	N/A
A	**ME**	Identify the illustration that demonstrates the effects of the sun on various materials.	N/A
I		Differentiate between pitch and volume.	N/A
A	**ME**	Identify how sounds are produced.	N/A

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